DE/AFS/SF

THE AMALGAMATED SUGAR COMPANY LLC

3184 ELDER STREET • BOISE, ID 83705
PHONE: (208) 383-6500 • FAX: (208) 383-6684

February 22, 2008

Idaho Department of Environmental Quality
Air Quality Permit to Construct Fees
Fiscal Office
1410 North Hilton
Boise, Idaho 83706-1255

RE: Modification Request No. 6 Evaporator Permit to Construct (No. 067-00001)
2008 Juice Run
The Amalgamated Sugar Company LLC (TASCO) Mini-Cassia Facility

Dear Sir or Madam:

Enclosed is the $1,000 check for the application fee for the attached PTC modification request for the No. 6 Evaporator Permit to Construct (No. 067-00001).

If you have any questions please call Larry Lloyd at (208) 438-2115 or me at (208) 383-6500.

Sincerely,

Dean C. DeLorey

Dean C. DeLorey
Director of Environmental Affairs
The Amalgamated Sugar Company LLC

DCD:ns

Cc: Boise – Joe Huff, John McCreedy, Bob Braun
Mini-Cassia – Larry Lloyd, Karen Cummings

DE/AFS/SF

THE AMALGAMATED SUGAR COMPANY LLC

3184 ELDER STREET • BOISE, ID 83705
PHONE: (208) 383-6500 • FAX: (208) 383-6684

February 21, 2008

William Rogers
Air Permit Program Coordinator
Idaho Department of Environmental Quality
1410 North Hilton
Boise, ID 83706

RE: Request for Temporary Permit Modification
No. 6 Evaporator Permit to Construct (No. 067-00001)
The Amalgamated Sugar Company LLC (TASCO) Mini-Cassia Facility

Dear Bill:

The Amalgamated Sugar Company LLC (TASCO) requests to temporarily modify the steam loading limitation in Permit to Construct (PTC) No. 067-00001. This request has been prepared in accordance with Idaho's procedures for revising Permits to Construct in IDAPA 58.01.01.209.04.

TASCO requests to temporarily increase the annual steam loading limitation in Condition 2.4 from 1,830,000 Klbs per campaign year to 1,890,000 Klbs per campaign year. Approval of this requested permit modification would decrease total emissions and decrease truck traffic on interstate I-84. Supporting documentation for this permit modification request is included in the following attachments:

- Attachment A - Certification Statement
- Attachment B - Proposed Permit Revision
- Attachment C - Emission Estimates
- Attachment D - Ambient Impact Analysis
- Attachment E - TAP's Analysis
- Attachment F - Revised Draft of Condition 2.4 of Permit to Construct No. 067-00001

If you have any questions, feel free to contact either Dean C. DeLorey at (208) 383-6532 or me at (208) 383-6517.

Sincerely,

Joe Huff
Vice President & COO
The Amalgamated Sugar Company LLC

DCD/ss

Attachment

cc: IDEQ – Steve VanZandt, Twin Falls
Boise – John McCreedy, Dean DeLorey, Bob Braun
Mini-Cassia – Larry Lloyd, Karen Cummings

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Attachment A

Certification Statement

Based on information and belief formed after reasonable inquiry, I certify the statements and information in this document are true.

Signature of Owner or Responsible Official

Joe Huff
Vice President & COO

2/21/2008
Date

Attachment B

Proposed Temporary Permit Revision No. 6 Evaporator PTC

ATTACHMENT B
Proposed Temporary Permit Revision
No. 6 Evaporator PTC

Overview

The Amalgamated Sugar Company LLC (TASCO) proposes to temporarily increase the annual steam loading limitation in the No. 6 Evaporator Permit to Construct (No. 067-00001). TASCO proposes to increase the annual steam production limitation in Condition 2.4 from 1,830,000 Klbs per year to 1,890,000 Klbs per year for the 2007 beet campaign year.

Project Description

The proposed 60,000 klb steam loading increase is needed for the processing of thick juice during the upcoming juice run. The Mini-Cassia facility has eight (8) thick juice storage tanks (33,000 tons each). Following the beet campaign, stored thick juice is transferred to the sugar end and processed into granulated sugar. The proposed steam loading increase to 1,890,000 klbs steam will allow up to 7 tanks to be processed. The remaining thick juice will be shipped offsite to either the Twin Falls or Nampa facilities for processing.

Off site shipments of juice result in increased shipping costs and overall emissions. Diesel fueled trucks or railcars are required for transporting the thick juice. In addition, the Nampa and Twin Falls facilities are less energy efficient than the Mini-Cassia facility. Therefore, more fuel and associated emissions will be generated to process the thick juice at the other facilities. Minimizing these shipments saves money and reduces overall emissions.

Equipment Changes

There are no equipment changes associated with this request which will increase emissions.

Emissions

Estimated emissions for an additional 60,000 Klbs steam per year are provided in Attachment C. Juice run boiler steam can be provided by any one of the following three boilers at the Mini-Cassia facility: 1) Erie City pulverized coal and natural gas-fired boiler; 2) B&W coal-fired stoker boiler; and/or 3) Nebraska backup natural gas-fired boiler. The most likely scenario is to operate the the Erie City boiler while firing coal. As shown, an additional 60,000 klbs of steam while firing coal or natural gas will result in only minor emissions increases.

Ambient Air Quality Impact Analysis

A conservative ambient air quality impact analysis was conducted for the juice run including the additional 60,000 Klb steam increase. Though not required, short-term ambient impacts were evaluated. In addition, total annual juice run emissions were also evaluated. As shown in Attachment D, predicted air pollutant concentrations are all well below the National Ambient Air Quality Standards (NAAQS).

Regulatory Analysis – Toxic Air Pollutants (TAP's)

In accordance with Idaho's TAP's preconstruction standards (IDAPA 58.01.01.210), net annual increases of trace elements from boiler operation during the juice run were evaluated. Net annual emissions were estimated for the 60,000 klb increase, based on the No. 6 Evaporator PTC application submitted to IDEQ on August 11, 2002. For those constituents above the screening levels in IDAPA 58.01.01.526 an air quality impact analysis was conducted. As shown in Attachment E, this proposed steam loading increase is in compliance with the TAP's preconstruction standards.

Regulatory Analysis – Criteria Pollutants

Attachment F includes proposed revisions to the No. 6 Evaporator PTC issued by IDEQ on June 14, 2006. Proposed revisions include federally enforceable limits which ensure emissions from the 60,000 klb steam increase remain below significance levels. As a result, this is a minor modification to the No. 6 Evaporator PTC.

Attachment C

Boiler Emissions Estimates
60,000 Klbs Steam Increase
Mini-Cassia Facility

EMISSION DATA SUMMARY - BOILER HOUSE
2008 Juice Run
60,000 klbs Additional Steam @175 klbs/h

Scenario	NO.	BOILER	POLLUTANT	UNIT	EMISSION LB/UNIT	REFERENCE	Emissions tons/y
#1	S-B2	ERIE CITY BOILER - STEAM (coal	PM	Klbs steam	0.306	IDAPA 58.01.01.677 (0.1 gr/dscf at 8% O_2)	9.2
			PM10	Klbs steam	0.306	Assume PM10 is 100% of PM	9.2
			SO2	Klbs steam	0.131	Eng. Stack Test Nov. 2002	3.9
			CO	Klbs steam	0.020	Eng. Stack Test Feb. 2005	0.6
			NOx	Klbs steam	1.29	Oct. 2005 Engineering Stack Test	38.7
			VOC	Klbs steam	0.0050	AP-42 9/98, Table 1.1-19, PC, methane & TNMOC	0.2
#2	S-B2	ERIE CITY BOILER - STEAM (gas)	PM	Klbs steam	2.94E-02	IDAPA 58.01.01.677 (0.015 gr/dscf at 3% O_2)	0.9
			PM10	Klbs steam	2.94E-02	AP-42, 7/98, Table 1.4-2	0.9
			SO2	Klbs steam	8.10E-04	AP-42, 7/98, Table 1.4-2	0.0
			CO	Klbs steam	1.10E-01	AP-42, 7/98, Table 1.4-1	3.3
			NOx	Klbs steam	3.70E-01	AP-42, 7/98, Table 1.4-1	11.1
			VOC	Klbs steam	7.30E-03	AP-42, 7/98, Table 1.4-2	0.2
#3	S-B1	B & W BOILER - STEAM (coal)	PM	Klbs steam	0.177	PM compliance test Dec 2003	5.3
			PM10	Klbs steam	0.177	PM compliance test Dec 2003	5.3
			SO2	Klbs steam	0.184	Eng. Stack Test Nov. 2002	5.5
			CO	Klbs steam	0.020	Eng. Stack Test Feb. 2005	0.6
			NOx	Klbs steam	1.24	Oct. 2005 Engineering Stack Test	37.2
			VOC	Klbs steam	0.0047	AP-42 9/98, Table 1.1-19 methane & TNMOC	0.1
#4	S-B3	NEBRASKA - STEAM (gas)	PM	Klbs steam	7.50E-03	AP-42, Table 1.4-2 (7/98) for natural gas	0.2
			PM10	Klbs steam	7.50E-03	AP-42, Table 1.4-2 (7/98) for natural gas	0.2
			SO2	Klbs steam	7.50E-04	AP-42, 7/98, Table 1.4-2	0.0
			CO	Klbs steam	9.25E-03	Compliance test at Nampa (Riley Boiler 1/04)	0.3
			NOx	Klbs steam	2.30E-02	Low NOx Burners 0.0183 lb/MMbtu	0.7
			VOC	Klbs steam	6.70E-03	AP-42, 7/98, Table 1.4-2	0.2

MINI-CASSIA

ERIE CITY BOILER (S-B2) – Coal
EMISSION FACTORS
February 2, 2007

PARTICULATE MATTER (PM10)

The PM10 emissions factor is based on the 0.100 grains/dscf (corrected to 8% O_2) limit in IDAPA 58.01.01.677. The maximum capacity of the boiler while firing coal is 220,000 lbs steam/hr, 297 MMBtu input/hr (calculation based on heat content of the steam of 1080 Btu/lb steam and 80% boiler efficiency) and 15.3 tons coal/hr. The heat content of coal is conservatively assumed to be 9700 Btu/lb coal. The estimated stack gas flow, from 40 CFR 60 Appendix A Method 19, for sub-bituminous coal combustion, adjusted at 8% O_2:

Fd = 0780 dscf/MMBtu *(20.9/(20.9-8)) = 15,845 dscf/MMBtu at 8% O_2

15,845 dscf/MMBtu * 297 MMBtu/hr * 1hr/60 min = 78,433 dscfm

0.100 grains/dscf * 78,433 dscf/min * 60 min/hr * 1 lb/7000 grains = 67.23 lb/hr

PM Emission Factor = (67.23 lbs/h)(1 h/220 Klbs steam) = 0.306 lbs/Klbs steam

The PM10 fraction is assumed to be 100% of the PM fraction.

PM10 Emission Factor = 0.306 lbs/Klbs steam

SULFUR DIOXIDE (SO_2)

The Erie City boiler SO_2 emission factor is based on engineering testing conducted at the Mini-Cassia facility on 11/19/02.

Test results show an average emissions rate over three runs of 23.5 lbs SO_2/hour. Steam loading rate during these tests average 179.67 Klbs/hour.

(23.5 LB SO_2/hour)/(179.67 Klbs steam/hour) = 0.131 lbs SO_2/Klb steam

NITROGEN OXIDE (NO_X)

The Erie City boiler NO_x emission factor is based on engineering testing conducted at the Mini-Cassia facility on 10/14/05.

Test results show an average emissions rate over three runs of 223 lbs NO_x/hour. Steam loading rate during these tests averaged 173 Klbs/hour.

(223 lb NO_x/hour)/(173 Klbs steam/hour) = 1.289 lbs NO_x Klb steam

CARBON MONOXIDE (CO)

The CO emissions factor is based on engineering testing conducted at the Mini-Cassia facility on February 16, 2005. Test results measured an average CO emissions rate of 2.95 lbs/h at a steam loading rate of 180,000 lbs/h.

EF = 2.95/180 = 0.02 lbs CO/Klb steam

MINI-CASSIA

ERIE CITY BOILER (S-B2) – Natural Gas
EMISSION FACTORS
February 13, 2008

PARTICULATE MATTER (PM10)

The PM10 emissions factor is based on the 0.0150 grains/dscf (corrected to 3% O_2) limit in IDAPA 58.01.01.677. The maximum capacity of the boiler is 250,000 lbs steam/hr and 337.5 MMBtu input/hr (calculation based on heat content of the steam of 1080 Btu/lb steam & 80 % boiler efficiency). The heat content of natural gas is conservatively assumed to be 1020 Btu / ft^3.

Based on the above assumptions, estimated exhaust gas flow is calculated based on 40CFR 60 Appendix A, Method 19 (for natural gas adjusted to 3% excess O_2).

Fd = (8,710 dscf / MMBtu)* [20.9 / (20.9 - 3)] = 10,170 dscf / MMBtu @ 3% O_2

(10,170 dscf / MMBtu)*(337.5 MMBtu / hr.)*(1 hr. / 60 minutes) = 57,206 dscfm

(0.015 grains/dscf)*(57,206 dscf/min.)*(60 min./hr.)*(1 lb. / 7,000 grains) = 7.36 lbs./hr.

Emission factor calculation:

(7.36 lbs /hr.)(1 h/250 Klbs steam) = 0.0294 lbs PM / 1,000 lbs Steam

SULFUR DIOXIDE (SO_2)

From AP-42, Table 1.4-2 (7/98) for natural gas combustion, for utility boilers, SO_2 emission factor is 0.6 lb/10^6 ft^3. Assume a 1020 Btu/ft^3 heat content of natural gas, a 1080 Btu/lb steam heat content and a 80 % boiler efficiency then

(0.6 lbs/10^6 ft^3)(1 ft^3/1020 Btu)(10^6 Btu/MMBtu) = 0.0006 lbs. / MMBtu

(0.0006 lb/MMBtu)(1/0.8)(1.080 x 10^{-3} MMBtu/steam)(1000 lbs/ klb steam) = 0.00081 lb/klb steam

NITROGEN OXIDE (NO_X)

From AP-42, Table 1.4-1(7/98) for natural gas combustion, for Large Wall-Fired Boilers (Uncontrolled, Pre-NSPS), NO_x emission factor is 280 lb/10^6 ft^3. Heat content of natural gas is 1020 Btu/ft^3, heat content of steam is 1080 Btu/lb steam and efficiency of the boiler is 80 %.

(280 lb/10^6 ft^3)(1 ft^3/1020 Btu)(10^6/MMBtu) = 0.274 lb/MMBTU

(0.274 lb/MMBtu)(1/0.80)(1.080 x 10^{-3} MMBtu/lb steam)(1000) = 0.370 lb/10^3 lb steam

CARBON MONOXIDE (CO)

From AP-42, Table 1.4-1 (7/98) for natural gas combustion, for utility boilers, CO emission factor is 84 lb/10^6ft^3. Using a natural gas heat content of 1,020 BTU/ft^3, heat content of steam is 1,080 BTU/lb steam and efficiency of the boiler is 80%.

$$(84 \text{ lb}/10^6 \text{ ft}^3)(1 \text{ ft}^3/1020 \text{ BTU})(10^6 \text{ BTU/MMBTU}) = 0.082 \text{ lb/MMBTU}$$

$$(0.082 \text{ lb/MMBTU})(1/0.8)(1.080 \times 10^{-3} \text{ MMBTU})(1000) = 0.11 \text{ lb}/10^3 \text{ steam}$$

VOLATILE ORGANIC COMPOUNDS (VOC)

From AP-42, Table 1.4-1 (7/98) for natural gas combustion, for utility boilers, VOC emission factor is 5.5 lb/10^6 ft^3. Using a heat content of 1020 Btu/ft^3 (EPA conversion factor), heat content of steam is 1080 Btu/lb steam and 80% boiler efficiency.

$$(5.5 \text{ lb}/10^6 \text{ ft}^3)(1 \text{ ft}^3/1020 \text{ Btu})(10^6 \text{ Btu/MMBtu}) = 0.00539 \text{ lbs/MMBtu}$$

Emission factor = $(0.00539 \text{ lb/MMBtu})(1/0.80)(1.080 \times 10^{-3} \text{ MMBtu})(1000) = 0.0073$ lb/1000 lb steam

MINI-CASSIA

B&W BOILER (S-B1) – Coal
EMISSION FACTORS
February 15, 2007

PARTICULATE MATTER (PM10)

A PM compliance test was conducted on the B&W boiler on December 2 and 3, 2003. The stack test report was submitted to IDEQ on March 2, 2004. The results are summarized as follows:

(26.49 lbs/h)/(165 Klbs/h) = 0.161 lbs/Klbs

Assume a 10% back half catch for PM10, then

0.161 x 1.10 = 0.177 lbs/Klbs

SULFUR DIOXIDE (SO_2)

The B&W boiler SO_2 emission factor is based on engineering testing conducted at the Mini-Cassia facility on 11/19/02.

Test results show an average emissions rate over three runs of 28.3 lbs SO_2/hour. Steam loading rate during these tests average 154 Klbs/hour.

(28.3 LB SO_2/hour)/(154 Klbs steam/hour) = 0.184 lbs SO_2/Klb steam

NITROGEN OXIDE (NO_X)

The B&W boiler NO_x emission factor is based on engineering testing conducted at the Mini-Cassia facility on 10/14/05.

Test results show an average emissions rate over three runs of 191 lbs NO_x/hour. Steam loading rate during these tests averaged 154 Klbs/hour.

(191 lb NO_x/hour)/(154 Klbs steam/hour) = 1.24 lbs NO_x Klb steam

With the installation of over-fire air, assume a 25% NO_x reduction, then
1.24 (1-.25) = 0.93 lbs/Klbs.

Attachment D

Air Quality Impact Analysis

2008 Juice Run

Air Quality Impact Analysis

for the

The Amalgamated Sugar Company LLC
Paul, Idaho

February 20, 2008

1.0 INTRODUCTION

An ambient air quality analysis for the Amalgamated Sugar Company LLC's (TASCO) Paul facility, for the 2008 Juice Run was completed. The analysis was performed at TASCO's corporate engineering offices.

2.0 INPUT PARAMETERS

The facility operates at a significantly reduced rate during the juice run compared to beet processing operations. Juice run emissions are approximately 10% of the beet processing emission rates. Table 1 presents the estimated PM10, NOx, SO_2, and CO emission rates for the Erie City boiler and the drying granulator. Table 2 details the stack parameters including stack height, exhaust temperature and the exhaust flow rate. The elevation of the boilers has been established at 1264 meters above mean sea level. Figure 1 illustrates the source and building locations.

3.0 MODEL

This modeling analysis utilized the Breeze suite of programs using EPA's AERMOD model Version 07026 and BPIP Prime model Version 4274. Previous modeling was conducted utilizing the ISCST3-Prime model.

4.0 METEOROLOGY

This analysis used meteorological data (met data) developed by Geomatrix of Lynwood, Washington using EPA's AERMET model (Version 06431). Upper air data was collected from the Boise Idaho meteorology station #24131 while the surface air was collected at the Burley, Idaho met station # 25867. Land use characteristics were processed in 12 sectors encompassing the Minidoka INEEL meteorological site using the AERMET user guide lookup tables. For this model, the meteorological period covered April 1, 2001 to August 31, 2001. Annual emissions were evaluated based on this period.

5.0 RECEPTOR GRID

The dispersion model included boundary receptors and two receptor grids. Figure 2 illustrates the fence line receptors and grid receptors. Figure 3 illustrates the locations of the predicted model concentrations. The facility boundary was extended to include the TASCO owned South Farm, lime pile and the water storage lagoons east of the piling grounds.

The full receptor grid consists of several receptor grids. Originally, receptors were placed every 200 meters on an 8.0 km by 10.8 km area grid, (2200 grid points) with the facility placed in the middle. Receptors were excluded within the facility boundaries, which includes the beet handling area, waste ponds, coal storage area, irrigation fields and the physical plant due to restricted public access. Fence (boundary) receptors were placed at the perimeter of the facility on a 50-meter spacing starting with the northwest corner of the property owned and controlled by

TASCO (as suggested in IDEQ's Air Quality Modeling Guideline). Based upon the results of initial simulations, a refined 2.5 km by 2 km receptor grid with 50 meter spacing between receptors was placed around the facility with an eastern most boundary at the public road 400 West. The smaller grid is represented by grid patterns of 51 by 41 (2091) receptors. The placement of the smaller 50-meter grid pattern was determined by evaluating previous model output and prevailing wind patterns.

On February 10, 2003, TASCO notified the IDEQ Regional Office at Twin Falls that it had purchased 89 acres north of the facility. The area purchased is called the Gillette-89. On January 23, 2004, TASCO again notified the IDEQ Regional Office at Twin Falls that it had purchased 87 acres known as the Goitiandia property also located north of the facility. The purchase and control of this property is reflected in the updated fence line receptors north of the facility. The AERMOD Model has also been updated to reflect control of the lime pile south of the facility and lagoons located to the east of the piling grounds. Discrete receptors have been placed at 50 meter intervals along road ways and railways to represent potential public access.

Terrain elevations for the receptors were obtained from USGS digital elevation model (DEM) 7.5-minute Rupert, Rupert_NW, Burley and Burley_NE quadrangles. These data have a horizontal spatial resolution of 30 meters. The receptor locations are expressed in units of UTM (NAD27) coordinates.

6.0 BACKGROUND CONCENTRATION

Background concentrations provided in Table 3, are conservative values provided by IDEQ. These values are likely well above actual concentrations. Background concentrations vary based on meteorological conditions and season. For example, 24-hour PM10 ambient monitoring data collected in Heyburn Idaho by J.R. Simplot from November 2000 thru January 2001 averaged 19.7 ug/m^3 (micrograms per cubic meter).

7.0 RESULTS and CONCLUSIONS

Table 3 presents the results of the analysis. Figure 3 illustrates the location of the maximum model-predicted concentrations.

As shown, model predicted ambient concentrations along with background concentrations are well below the NAAQS's.

Table 1. Paul Modeled Pollutant Emissions – 2008 Juice Run on Coal

Pollutant	Emission Rates (lb/hr)	
	Erie City Boiler	Sugar End Sources
	P-B2	PW1-PW5
PM_{10} Long Term	14.2	0.43
PM_{10} Short Term	61.2	2.07
SO_2 Long Term	6.1	
SO_2 Short Term	26.2	
NO_x Long Term	59.6	
CO Short Term	4.0	

Table 2. Stack Data for Stationary Point Sources

Emission Source (Point)	Source ID	Stack			Temperature (°F)	Exit Velocity[1] (ft / min)	Stack Diameter[2] (ft)
		Height (ft)	UTM Easting (m)	UTM Northing (m)			
Erie City Boiler	P-B2	144	273819	4721176	105	1524	10
Drying Granulator	P-W1	85	273780	4721248	90.05	4776	2.0

Table 3. Maximum Predicted Concentrations

Constituent	Period	Concentrations (ug / m³)	Background Concentration (ug / m³)	Total Concentration (ug / m³)	NAAQS Concentration (ug / m³)
PM 10	24-hour 2nd highest	14.5	73	87.5	150
	Annual 1st highest	3.02	27	30	50
SO2	3-hour 2nd highest	24.1	34	58.1	1300
	24-hour 2nd highest	5.69	26	31.7	365
	Annual 1st highest	0.13	8	8.13	80
CO	1-hour 2nd highest	10.8	3600	3611	40,000
	8-hour 2nd highest	1.97	2300	2302	10,000
NOx	Annual 1st highest	1.31	17	18.3	100

Figure 1. Facility Layout Showing Buildings, Tanks, and Stacks

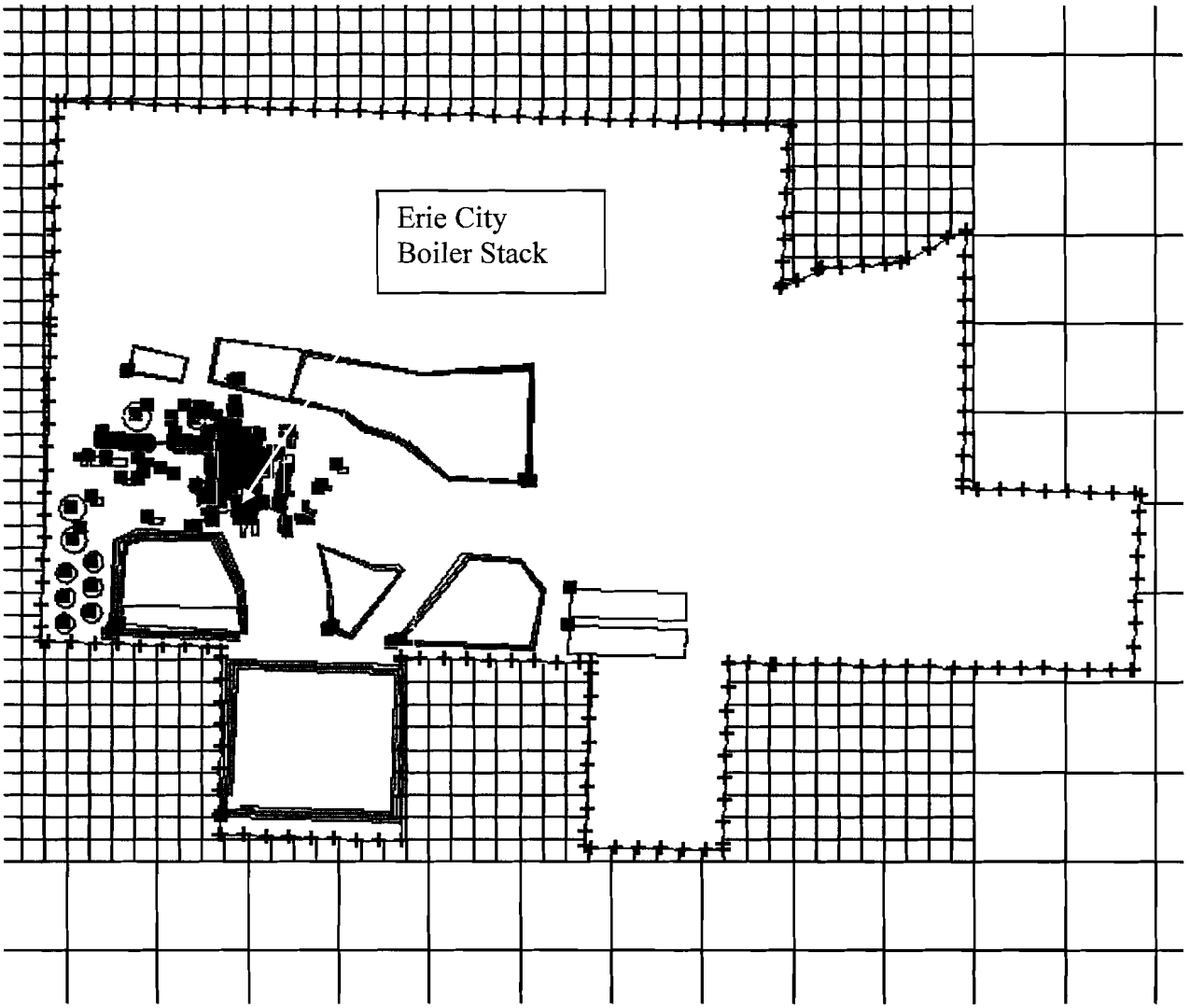


Figure 2. Fence Line and Receptor Grid

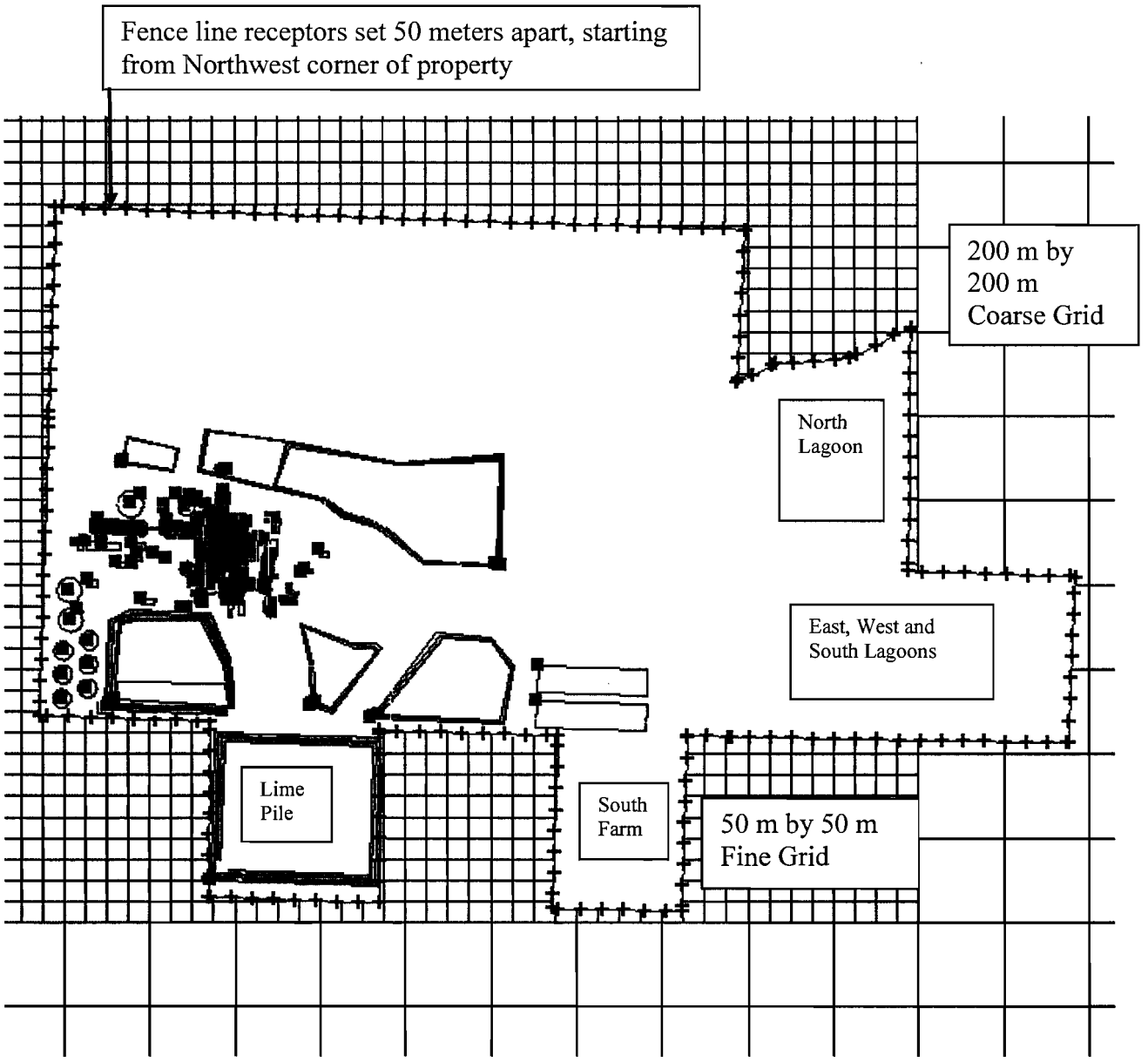
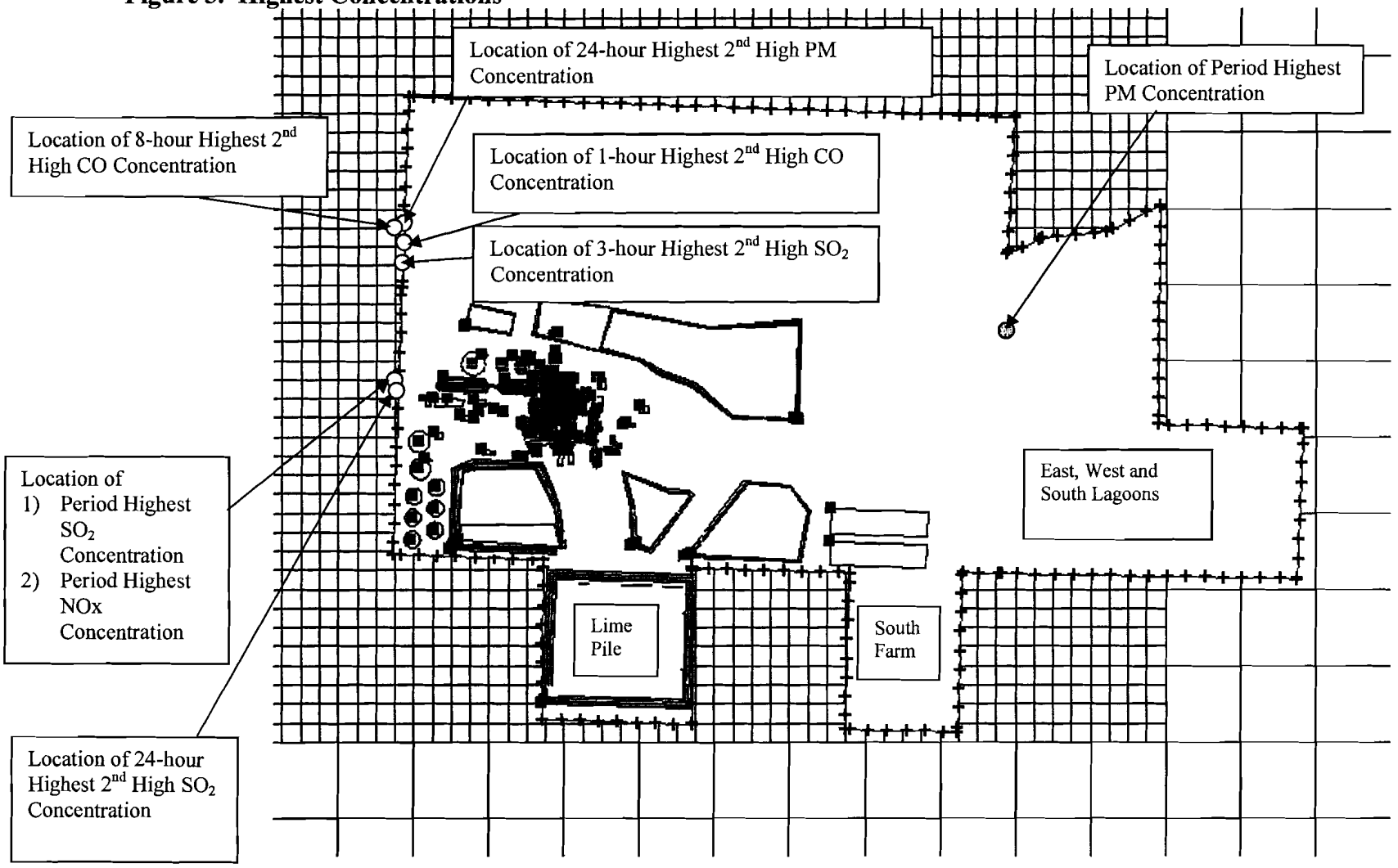


Figure 3. Highest Concentrations



Attachment E
Toxic Air Pollutant
Boiler Emissions Estimates &
Air Quality Impact Analysis

2008 Juice Run – Additional Steam
Mini-Cassia Facility

Maximum Annual Air Toxics Analysis
Additional 60,000 klb Boiler Steam
2008 Juice Run
Mini Cassia Facility

Pollutant	AAAC (ug/m3)	2002 Application Emissions (lb/h)	2002 Application Impact (ug/m3)	Projected 2008 Juice Run Emissions (lb/h)	Projected 2008 Juice Run Impact (ug/m3)
Arsenic Compounds	2.3E-04	1.7E-04	7.3E-06	2.0E-04	8.4E-06
Cadmium Compounds	5.6E-04	2.1E-05	9.0E-07	2.4E-05	1.0E-06
Hexavalent Chromium	8.3E-05	3.3E-05	1.5E-07	3.8E-05	1.7E-07
Nickel	4.2E-03	1.2E-04	5.0E-06	1.4E-04	5.8E-06
Acetaldehyde	4.5E-01	2.4E-04	1.0E-05	2.8E-04	1.2E-05
Formaldehyde	7.7E-02	6.0E-04	2.6E-05	6.9E-04	3.0E-05
Methyl Hydrazine	3.2E-03	7.0E-05	3.1E-06	8.1E-05	3.6E-06

2002 Application - Emissions & air quality impacts based on a net steam increase of 52,188 klbs steam.

TAP's EI
60,000 Klb Steam

60,000 Juice Run Steam Increase
Tasco Mini-Cassia Factory
Emissions Inventory
February 19, 2008

TOXIC AIR POLLUTANT EMISSION FACTORS, EMISSIONS INCREASE, AND SCREENING EMISSION LEVELS (EL)")

		Erie City Boiler				Total		
	Compound	Emission Factor (lb/1000 lb steam)[2,3]	Annual Emission Increase (lb/yr)[4]	Hourly Emission Increase (lb/hr)[5]	Emission Factor Reference	Hourly Emission Increase (lb/hr)	EL (lb/hr)	Exceeds EL? (yes/no)
Non-Carcinogenic Compounds	Acetophenone	1.0E-06	6.3E-02	1.4E-05	AP-42, 1.1-14	1.4E-05	NA	no
	Acrolein	2.0E-05	1.2E+00	2.7E-04	AP-42, 1.1-14	2.7E-04	0.017	no
	Ammonia	--	--	--	AP-42, 1.1-14	--	1.2	no
	Antimony	1.3E-06	7.5E-02	1.6E-05	AP-42, 1.1-18	1.6E-05	0.033	no
	Benzyl Chloride	4.9E-05	2.9E+00	6.4E-04	AP-42, 1.1-14	6.4E-04	NA	no
	Bromoform	2.7E-06	1.6E-01	3.6E-05	AP-42, 1.1-14	3.6E-05	0.333	no
	Carbon Disulfide	9.0E-06	5.4E-01	1.2E-04	AP-42, 1.1-14	1.2E-04	2	no
	2-Chloroacetophenone	4.9E-07	2.9E-02	6.4E-06	AP-42, 1.1-14	6.4E-06	NA	no
	Chlorobenzene	1.5E-06	9.2E-02	2.0E-05	AP-42, 1.1-14	2.0E-05	23.3	no
	Chromium (Total)	1.8E-05	1.1E+00	2.4E-04	AP-42, 1.1-18	2.4E-04	0.033	no
	Cobalt	7.0E-06	4.2E-01	9.2E-05	AP-42, 1.1-18	9.2E-05	0.0033	no
	Cumene	3.7E-07	2.2E-02	4.9E-06	AP-42, 1.1-14	4.9E-06	16.3	no
	Cyanide	1.7E-04	1.0E+01	2.3E-03	AP-42, 1.1-14	2.3E-03	0.333	no
	2,4-Dinitrotoluene	1.9E-08	1.2E-03	2.6E-07	AP-42, 1.1-14	2.6E-07	NA	no
	Dimethyl Sulfate	3.3E-06	2.0E-01	4.4E-05	AP-42, 1.1-14	4.4E-05	NA	no
	Ethyl Benzene	6.5E-06	3.9E-01	8.6E-05	AP-42, 1.1-14	8.6E-05	29	no
	Ethyl Chloride	2.9E-06	1.8E-01	3.8E-05	AP-42, 1.1-14	3.8E-05	176	no
	Ethylene Dichloride	2.8E-06	1.7E-01	3.7E-05	AP-42, 1.1-14	3.7E-05	2.667	no
	Fluorides, as F	1.0E-02	6.3E+02	1.4E-01	AP-42, 1.1-15	1.4E-01	0.167	no
	Hexane	4.7E-06	2.8E-01	6.1E-05	AP-42, 1.1-14	6.1E-05	12	no
	Hydrogen Chloride	1.1E-02	6.7E+02	1.5E-01	2001 TCRI	1.5E-01	0.05	yes
	Hydrogen Sulfide	ND					0.933	no
	Isophorone	4.0E-05	2.4E+00	5.3E-04	AP-42, 1.1-14	5.3E-04	1.867	no
	Lead	2.9E-05	1.8E+00	3.8E-04	AP-42, 1.1-18	3.8E-04	NA	no
	Magnesium	7.7E-04	4.6E+01	1.0E-02	AP-42, 1.1-18	1.0E-02	NA	no
	Manganese	3.4E-05	2.0E+00	4.5E-04	AP-42, 1.1-18	4.5E-04	0.333	no
	Mercury	5.8E-06	3.5E-01	7.6E-05	AP-42, 1.1-18	7.6E-05	0.007	no
Non-Carcinogenic Compounds	Methyl Bromide	1.1E-05	6.7E-01	1.5E-04	AP-42, 1.1-14	1.5E-04	1.27	no
	Methyl Chloride	3.7E-05	2.2E+00	4.9E-04	AP-42, 1.1-14	4.9E-04	6.867	no
	Methyl Ethyl Ketone	2.7E-05	1.6E+00	3.6E-04	AP-42, 1.1-14	3.6E-04	39.3	no
	Methyl Methacylate	1.4E-06	8.4E-02	1.8E-05	AP-42, 1.1-14	1.8E-05	27.3	no
	Methyl Tert Butyl Ether	2.4E-06	1.5E-01	3.2E-05	AP-42, 1.1-14	3.2E-05	NA	no
	Naphthalene	9.0E-07	5.4E-02	1.2E-05	AP-42, 1.1-13	1.2E-05	3.33	no
	Phenol	1.1E-06	6.7E-02	1.5E-05	AP-42, 1.1-14	1.5E-05	1.27	no
	Propionaldehyde	2.6E-05	1.6E+00	3.5E-04	AP-42, 1.1-14	3.5E-04	0.0287	no
	Selenium	9.0E-05	5.4E+00	1.2E-03	AP-42, 1.1-18	1.2E-03	0.013	no
	Styrene	1.7E-06	1.0E-01	2.3E-05	AP-42, 1.1-14	2.3E-05	6.67	no
	Sufuric Acid	1.0E-02	6.3E+02	1.4E-01	AP-42, 1.1-3	1.4E-01	0.067	yes
	Toluene	1.7E-05	1.0E+00	2.2E-04	AP-42, 1.1-14	2.2E-04	25	no
	Xylene (Total)	2.6E-06	1.5E-01	3.4E-05	AP-42, 1.1-14	3.4E-05	29	no
	Vinyl Acetate	5.3E-07	3.2E-02	7.0E-06	AP-42, 1.1-14	7.0E-06	NA	no
Carcinogenic Compounds[6]	Acetaldehyde	4.0E-05	2.4E+00	2.7E-04	AP-42, 1.1-14	2.7E-04	3.0E-03	no
	Arsenic Compounds	2.9E-05	1.7E+00	2.0E-04	AP-42, 1.1-18	2.0E-04	1.5E-06	yes
	Asbestos	ND					ND	

60,000 Juice Run Steam Increase
Tasco Mini-Cassia Factory
Emissions Inventory
February 19, 2008

TOXIC AIR POLLUTANT EMISSION FACTORS, EMISSIONS INCREASE, AND SCREENING EMISSION LEVELS (EL)")

		Erie City Boiler				Total		
	Compound	Emission Factor (lb/1000 lb steam)[2,3]	Annual Emission Increase (lb/yr)[4]	Hourly Emission Increase (lb/hr)[5]	Emission Factor Reference	Hourly Emission Increase (lb/hr)	EL (lb/hr)	Exceeds EL? (yes/no)
	Benzene	9.0E-05	5.4E+00	6.2E-04	AP-42, 1.1-14	6.2E-04	8.0E-04	no
	Beryllium Compounds	1.5E-06	8.8E-02	1.0E-05	AP-42, 1.1-18	1.0E-05	2.8E-05	no
	Bis(2-ethylhexyl)phthalate	5.1E-06	3.0E-01	3.5E-05	AP-42, 1.1-14	3.5E-05	2.8E-02	no
	Cadmium Compounds	3.5E-06	2.1E-01	2.4E-05	AP-42, 1.1-18	2.4E-05	3.7E-06	yes
	Chloroform	4.1E-06	2.5E-01	2.8E-05	AP-42, 1.1-14	2.8E-05	2.8E-04	no
	Chromium 6+ Compounds	5.5E-06	3.3E-01	3.8E-05	AP-42, 1.1-18	3.8E-05	5.6E-07	yes
	Ethylene Dibromide	8.4E-08	5.0E-03	5.7E-07	AP-42, 1.1-14	5.7E-07	3.0E-05	no
	Formaldehyde	1.0E-04	6.1E+00	6.9E-04	AP-42, 1.4-3	6.9E-04	5.1E-04	yes
	Methyl Hydrazine	1.2E-05	7.1E-01	8.1E-05	AP-42, 1.1-14	8.1E-05	2.2E-05	yes
	Methylene Chloride	2.0E-05	1.2E+00	1.4E-04	AP-42, 1.1-14	1.4E-04	1.6E-03	no
Carcinogenic Compounds[6]	Nickel	1.9E-05	1.2E+00	1.3E-04	AP-42, 1.1-18	1.3E-04	2.7E-05	yes
	PAHs	5.4E-07	3.2E-02	3.7E-06	AP-42, 1.1-13	3.7E-06	9.1E-05	no
	POM	2.7E-08	1.6E-03	1.9E-07	AP-42, 1.1-13	1.9E-07	2.0E-06	no
	Tetrachloroethylene	3.0E-06	1.8E-01	2.0E-05	AP-42, 1.1-14	2.0E-05	1.3E-02	no
	1,1,1-Trichloroethane	1.4E-06	8.4E-02	9.5E-06	AP-42, 1.1-14	9.5E-06	4.2E-04	no
	Vinyl Chloride	ND					9.40E-04	no
	Total (tons/y)		1					

ND - Value not available

(1) Increased annual Beet End carcinogenic and non-carcinogenic emissions were calculated from the emission factor and increased annual beet slice in Table B-1. Increased hourly Beet End non-carcinogenic emissions were calculated from the emission factor and increased daily beet slice in Table B-1.

(2) AP-42 emission factors for bituminous and subbitumiuous coal were compared with emission factors for gas after being converted to units of lb/1000 lb steam. The larger factors were used in this inventory. The emission factor for formaldehyde was the only larger factor for gas.

(3) AP-42 coal emission factors in units of lb/ton coal were converted to units of lb/1,000 lb steam using 1,080 Btu/lb steam, 9,700 Btu/lb coal, and the assumption of 80% efficiency for the Boiler. AP-42 gas emission factors in units of lb/MMcf gas were converted to units of lb/1,000 lb steam using 1,080 Btu/lb steam, 1,000 Btu/MMcf, and the assumption of 80% efficiency for the Boiler.

(4) Increased annual boiler carcinogenic and non-carcinogenic emissions were calculated from the emission factor and increased annual steam utilization in Table B-1.

(5) For non-carcinogenic compounds emitted from the boiler, there is no hourly emissions increase because this project does not increase the hourly sugar production rate and therefore does not increase hourly boiler utilization. However, hourly emission increase has been conservatively estimated by dividing the annual emissions increase by the projected annual operating hours (190 days *24 hr/day = 4,560 hr).

(6) Hourly carcinogenic compound emisions from the Beet End and Erie City boiler were annualized by dividing the annual increase by 8,760 hours.

TAP's EI
2002 Application

Air Quality Permitting Assistance/Evaporator Project
Tasco Mini-Cassia Factory
Project 10036-003-000
Emissions Inventory
September 25, 2002

TABLE B-6. TOXIC AIR POLLUTANT EMISSION FACTORS, EMISSIONS INCREASE, AND SCREENING EMISSION LEVELS (EL)

Compound		Beet End				Erie City Boiler				Total	EL (lb/hr)	Exceeds EL? (yes/no)
		Emission Factor (lb/ton beets)	Annual Emission Increase (lb/yr)[1]	Hourly Emission Increase (lb/hr)[1]	Emission Factor Reference	Emission Factor (lb/1000 lb steam)[2,3]	Annual Emission Increase (lb/yr)[4]	Hourly Emission Increase (lb/hr)[5]	Emission Factor Reference	Hourly Emission Increase (lb/hr)		
Non-Carcinogenic Compounds	Acetophenone	--	--	--	--	1.0E-06	5.4E-02	1.2E-05	AP-42, 1.1-14	1.2E-05	NA	no
	Acrolein	5.7E-05	3.6E+01	8.3E-03	Source Test	2.0E-05	1.1E+00	2.3E-04	AP-42, 1.1-14	8.5E-03	0.017	no
	Ammonia	6.4E-01	4.1E+05	9.3E+01	Source Test	--	--	--	AP-42, 1.1-14	9.3E+01	1.2	yes
	Antimony	--	--	--	--	1.3E-06	6.5E-02	1.4E-05	AP-42, 1.1-18	1.4E-05	0.033	no
	Benzyl Chloride	--	--	--	--	4.9E-05	2.5E+00	5.6E-04	AP-42, 1.1-14	5.6E-04	NA	no
	Bromoform	--	--	--	--	2.7E-06	1.4E-01	3.1E-05	AP-42, 1.1-14	3.1E-05	0.333	no
	Carbon Disulfide	--	--	--	--	9.0E-06	4.7E-01	1.0E-04	AP-42, 1.1-14	1.0E-04	2	no
	2-Chloroacetophenone	--	--	--	--	4.9E-07	2.5E-02	5.6E-06	AP-42, 1.1-14	5.6E-06	NA	no
	Chlorobenzene	--	--	--	--	1.5E-06	8.0E-02	1.8E-05	AP-42, 1.1-14	1.8E-05	23.3	no
	Chromium (Total)	--	--	--	--	1.8E-05	9.4E-01	2.1E-04	AP-42, 1.1-18	2.1E-04	0.033	no
	Cobalt	--	--	--	--	7.0E-06	3.6E-01	8.0E-05	AP-42, 1.1-18	8.0E-05	0.0033	no
	Cumene	--	--	--	--	3.7E-07	1.9E-02	4.2E-06	AP-42, 1.1-14	4.2E-06	16.3	no
	Cyanide	--	--	--	--	1.7E-04	9.1E+00	2.0E-03	AP-42, 1.1-14	2.0E-03	0.333	no
	2,4-Dinitrotoluene	--	--	--	--	1.9E-08	1.0E-03	2.2E-07	AP-42, 1.1-14	2.2E-07	NA	no
	Dimethyl Sulfate	--	--	--	--	3.3E-06	1.7E-01	3.8E-05	AP-42, 1.1-14	3.8E-05	NA	no
	Ethyl Benzene	--	--	--	--	6.5E-06	3.4E-01	7.5E-05	AP-42, 1.1-14	7.5E-05	29	no
	Ethyl Chloride	--	--	--	--	2.9E-06	1.5E-01	3.3E-05	AP-42, 1.1-14	3.3E-05	176	no
	Ethylene Dichloride	--	--	--	--	2.8E-06	1.5E-01	3.2E-05	AP-42, 1.1-14	3.2E-05	2.667	no
	Fluorides, as F	--	--	--	--	1.0E-02	5.4E+02	1.2E-01	AP-42, 1.1-15	1.2E-01	0.167	no
	Hexane	--	--	--	--	4.7E-06	2.4E-01	5.3E-05	AP-42, 1.1-14	5.3E-05	12	no
	Hydrogen Chloride	--	--	--	--	1.1E-02	5.8E+02	1.3E-01	2001 TCRI	1.3E-01	0.05	yes
	Hydrogen Sulfide		--	--	--	ND					0.933	no
	Isophorone	--	--	--	--	4.0E-05	2.1E+00	4.6E-04	AP-42, 1.1-14	4.6E-04	1.867	no
	Lead	--	--	--	--	2.9E-05	1.5E+00	3.3E-04	AP-42, 1.1-18	3.3E-04	NA	no
	Magnesium	--	--	--	--	7.7E-04	4.0E+01	8.8E-03	AP-42, 1.1-18	8.8E-03	NA	no

Air Quality Permitting Assistance/Evaporator Project
Tasco Mini-Cassia Factory
Project 10036-003-000
Emissions Inventory
September 25, 2002

TABLE B-6. TOXIC AIR POLLUTANT EMISSION FACTORS, EMISSIONS INCREASE, AND SCREENING EMISSION LEVELS (EL)

Compound		Beall End				Erie City Boiler				Total	EL (lb/hr)	Exceeds EL? (yes/no)
		Emission Factor (lb/ton beats)	Annual Emission Increase (lb/yr)[4]	Hourly Emission Increase (lb/hr)[5]	Emission Factor Reference	Emission Factor (lb/1000 lb steam)[2,3]	Annual Emission Increase (lb/yr)[3]	Hourly Emission Increase (lb/hr)[3]	Emission Factor Reference	Hourly Emission Increase (lb/hr)		
	Manganese	--	--	--	--	3.4E-05	1.8E+00	3.9E-04	AP-42, 1.1-18	3.9E-04	0.333	no
	Mercury	--	--	--	--	5.8E-06	3.0E-01	6.6E-05	AP-42, 1.1-18	6.6E-05	0.007	no
Non-Carcinogenic Compounds	Methyl Bromide	--	--	--	--	1.1E-05	5.8E-01	1.3E-04	AP-42, 1.1-14	1.3E-04	1.27	no
	Methyl Chloride	--	--	--	--	3.7E-05	1.9E+00	4.2E-04	AP-42, 1.1-14	4.2E-04	6.867	no
	Methyl Ethyl Ketone	1.2E-06	7.4E-01	1.7E-04	Source Test	2.7E-05	1.4E+00	3.1E-04	AP-42, 1.1-14	4.8E-04	39.3	no
	Methyl Methacylate	--	--	--	--	1.4E-06	7.3E-02	1.6E-05	AP-42, 1.1-14	1.6E-05	27.3	no
	Methyl Tert Butyl Ether	--	--	--	--	2.4E-06	1.3E-01	2.8E-05	AP-42, 1.1-14	2.8E-05	NA	no
	Naphthalene	--	--	--	--	9.0E-07	4.7E-02	1.0E-05	AP-42, 1.1-13	1.0E-05	3.33	no
	Phenol	--	--	--	--	1.1E-06	5.8E-02	1.3E-05	AP-42, 1.1-14	1.3E-05	1.27	no
	Propionaldehyde	--	--	--	--	2.6E-05	1.4E+00	3.0E-04	AP-42, 1.1-14	3.0E-04	0.0287	no
	Selenium	--	--	--	--	9.0E-05	4.7E+00	1.0E-03	AP-42, 1.1-18	1.0E-03	0.013	no
	Styrene	--	--	--	--	1.7E-06	9.1E-02	2.0E-05	AP-42, 1.1-14	2.0E-05	6.67	no
	Sufuric Acid	--	--	--	--	1.0E-02	5.4E+02	1.2E-01	AP-42, 1.1-3	1.2E-01	0.067	yes
	Toluene	--	--	--	--	1.7E-05	8.7E-01	1.9E-04	AP-42, 1.1-14	1.9E-04	25	no
	Xylene (Total)	--	--	--	--	2.6E-06	1.3E-01	2.9E-05	AP-42, 1.1-14	2.9E-05	29	no
	Vinyl Acetate	--	--	--	--	5.3E-07	2.8E-02	6.1E-06	AP-42, 1.1-14	6.1E-06	NA	no
Carcinogenic Compounds[6]	Acetaldehyde	9.6E-03	6.1E+03	7.0E-01	Source Test	4.0E-05	2.1E+00	2.4E-04	AP-42, 1.1-14	7.0E-01	3.0E-03	yes
	Arsenic Compounds	--	--	--	--	2.9E-05	1.5E+00	1.7E-04	AP-42, 1.1-18	1.7E-04	1.5E-06	yes
	Asbestos	--	--	--	--	ND					ND	
	Benzene	--	--	--	--	9.0E-05	4.7E+00	5.4E-04	AP-42, 1.1-14	5.4E-04	8.0E-04	no
	Beryllium Compounds	--	--	--	--	1.5E-06	7.6E-02	8.7E-06	AP-42, 1.1-18	8.7E-06	2.8E-05	no
	Bis(2-ethylhexyl)phthalate	--	--	--	--	5.1E-06	2.6E-01	3.0E-05	AP-42, 1.1-14	3.0E-05	2.8E-02	no
	Cadmium Compounds	--	--	--	--	3.5E-06	1.9E-01	2.1E-05	AP-42, 1.1-18	2.1E-05	3.7E-06	yes
	Chloroform	--	--	--	--	4.1E-06	2.1E-01	2.4E-05	AP-42, 1.1-14	2.4E-05	2.8E-04	no
	Chromium 6+ Compounds	--	--	--	--	5.5E-06	2.9E-01	3.3E-05	AP-42, 1.1-18	3.3E-05	5.6E-07	yes

TABLE B-6. TOXIC AIR POLLUTANT EMISSION FACTORS, EMISSIONS INCREASE, AND SCREENING EMISSION LEVELS (EL)

Compound		Beet End				Erie City Boiler				Total	EL (lb/hr)	Exceeds EL? (yes/no)
		Emission Factor (lb/ton beets)	Annual Emission Increase (lb/yr)[1]	Hourly Emission Increase (lb/hr)[1]	Emission Factor Reference	Emission Factor (lb/1000 lb steam)[2a]	Annual Emission Increase (lb/yr)[4]	Hourly Emission Increase (lb/hr)[5]	Emission Factor Reference	Hourly Emission Increase (lb/hr)		
	Ethylene Dibromide	--	--	--	--	8.4E-08	4.4E-03	5.0E-07	AP-42, 1.1-14	5.0E-07	3.0E-05	no
	Formaldehyde	1.2E-03	7.7E+02	8.8E-02	Source Test	1.0E-04	5.3E+00	6.0E-04	AP-42, 1.4-3	8.8E-02	5.1E-04	yes
	Methyl Hydrazine	--	--	--	--	1.2E-05	6.2E-01	7.0E-05	AP-42, 1.1-14	7.0E-05	2.2E-05	yes
	Methylene Chloride	--	--	--	--	2.0E-05	1.1E+00	1.2E-04	AP-42, 1.1-14	1.2E-04	1.6E-03	no
Carcinogenic Compounds[6]	Nickel	--	--	--	--	1.9E-05	1.0E+00	1.2E-04	AP-42, 1.1-18	1.2E-04	2.7E-05	yes
	PAHs	--	--	--	--	5.4E-07	2.8E-02	3.2E-06	AP-42, 1.1-13	3.2E-06	9.1E-05	no
	POM	--	--	--	--	2.7E-08	1.4E-03	1.6E-07	AP-42, 1.1-13	1.6E-07	2.0E-06	no
	Tetrachloroethylene	--	--	--	--	3.0E-06	1.6E-01	1.8E-05	AP-42, 1.1-14	1.8E-05	1.3E-02	no
	1,1,1-Trichloroethane	--	--	--	--	1.4E-06	7.3E-02	8.3E-06	AP-42, 1.1-14	8.3E-06	4.2E-04	no
	Vinyl Chloride	--	--	--	--	ND					9.40E-04	no

ND - Value not available

(1) Increased annual Beet End carcinogenic and non-carcinogenic emissions were calculated from the emission factor and increased annual beet slice in Table B-1. Increased hourly Beet End non-carcinogenic emissions were calculated from the emission factor and increased daily beet slice in Table B-1.

(2) AP-42 emission factors for bituminous and subbitumiuous coal were compared with emission factors for gas after being converted to units of lb/1000 lb steam. The larger factors were used in this inventory. The emission factor for formaldehyde was the only larger factor for gas.

(3) AP-42 coal emission factors in units of lb/ton coal were converted to units of lb/1,000 lb steam using 1,080 Btu/lb steam, 9,700 Btu/lb coal, and the assumption of 80% efficiency for the Boiler. AP-42 gas emission factors in units of lb/MMcf gas were converted to units of lb/1,000 lb steam using 1,080 Btu/lb steam, 1,000 Btu/MMcf, and the assumption of 80% efficiency for the Boiler.

(4) Increased annual boiler carcinogenic and non-carcinogenic emissions were calculated from the emission factor and increased annual steam utilization in Table B-1.

(5) For non-carcinogenic compounds emitted from the boiler, there is no hourly emissions increase because this project does not increase the hourly sugar production rate and therefore does not increase hourly boiler utilization. However, hourly emission increase has been conservatively estimated by dividing the annual emissions increase by the projected annual operating hours (190 days *24 hr/day = 4,560 hr).

(6) Hourly carcinogenic compound emisions from the Beet End and Erie City boiler were annualized by dividing the annual increase by 8,760 hours.

APPENDIX C
AIR QUALITY IMPACT ANALYSIS
EVAPORATOR PROJECT

The Amalgamated Sugar Co. LLC
Mini-Cassia Factory
Paul, Idaho

Prepared by:
ENSR® Corporation
Sacramento, California

August, 2002
Project Number 10036-003

Table 9

Maximum Annual Air Toxic Impacts at the Mini-Cassia Factory, Estimated with ISCST3

Pollutant	AAAC ($\mu g/m^3$)	Maximum Modeled Impact ($\mu g/m^3$)	Location	
			X (m)	Y (m)
Acetaldehyde	4.5E-1	4.1E-1	178	281
Arsenic Compounds	2.3E-4	7.3E-6	720	-388
Cadmium Compounds	5.6E-4	9.0E-7	720	-388
Hexavalent Chromium	8.3E-5	1.5E-7	720	-388
Formaldehyde	7.7E-2	5.2E-2	178	281
Methyl Hydrazine	3.2E-3	3.1E-6	720	-388
Nickel	4.2E-3	5.0E-6	720	-388

The air toxic compounds with the largest annual offsite impacts are formaldehyde and acetaldehyde. The maximum modeled annual acetaldehyde and formaldehyde impacts occur along the northwestern facility fence line. The locations of the maximum impacts are given in Figure 4. The peak annual impact locations for the remaining pollutants also occur along the northern property boundary.

The input and output modeling files are given in the attached CD-ROM containing the air quality modeling files.

Attachment F

Proposed Revisions to Condition 2.4 of the No. 6 Evaporator Permit to Construct

2. FACILITY LIMITS

2.1 Process Description

The No. 6 Evaporator is used to evaporate water from sugar juices to produce dry granulated sugar.

Emissions Limits

2.2 Opacity Limit

Emissions from any stack, vent, or functionally equivalent opening associated with the processing of beets or the production of sugar, shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as required by IDAPA 58.01.01.625 (Rules for the Control of Air Pollution in Idaho). Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625.

Operating Requirements

2.3 Beet Throughput Limits

- Throughput of beets to the facility shall not exceed 19,550 T/day.
- Throughput of beets to the facility shall not exceed 3,200,000 tons per campaign year.

2.4 Steam Production Limit

2.5.1 Steam production from the facility's boilers shall not exceed 1,830,000 Klbs of steam per campaign year (klb/yr) except as allowed by Condition 2.5.2.

2.5.2 For the 2007 campaign year, the permittee shall not exceed an additional 60,000 Klbs steam from any combination of: (a) the Erie City or B&W boiler using coal; or (b) the Erie City or Nebraska boilers using natural gas.

2.6 Reasonable Control of Fugitive Emissions

All reasonable precautions shall be taken to prevent PM from becoming airborne as required in IDAPA 58.01.01.651. In determining what is a reasonable, consideration will be given to factors such as the proximity of dust-emitting operations to human habitations and/or activities and atmospheric conditions that might affect the movement of PM. Some of the reasonable precautions include, but are not limited to, the following:

- Use, where practical, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of lands;
- Application, where practical, of asphalt, oil, water or suitable chemicals to, or covering of dirt roads, material stockpiles, and other surfaces which can create dust;
- Installation and use, where practical, of hoods, fans and fabric filters or equivalent systems to enclose and vent the handling of dusty materials. Adequate containment methods should be employed during sandblasting or other operations;

- Covering, where practical, of open-bodied trucks transporting materials likely to give rise to airborne dusts;